

SPECIFICATION AMENDMENTS

Page 1, second paragraph:

The invention relates to a piston pump, in particular for transporting highly viscous media from a storage reservoir to an implement, for example a spray gun, having a differential piston disposed in a cylindrical housing and translationally drivable, whose first pressure chamber is connectable ~~alternately~~ with the second chamber via a check valve inserted into a connecting line, and with the supply reservoir via an inlet valve inserted into a transport line.

Page 2, last paragraph, continuing on to page 3:

It is preferable here to provide the pass-through for the piston rod and segments of the transport line in a connecting piece that is joined with the differential piston housing, and on which an extension piece that receives the dipping piston is mounted diametrically opposite the housing, where the inlet valve that is upline from the first pressure chamber ~~should be~~ is located in the connecting piece and ~~should consist of~~ comprises a ball placed in a flow-through cage, able to move against the force of a spring, and a valve seat in the form of a ring. In an ~~alternate~~ alternative design, the pass-through for the piston rod ~~may be~~ is provided in an internal partition of the housing, and the transport line ~~may be~~ is formed in this area by cutouts made in the internal partition, preferably bored holes, running concentrically to the pass-through.

Page 3, first full paragraph:

The inlet valve that is upline from the first pressure chamber of the differential piston may be formed ~~here~~ simply by means of a sealing ring associated with the openings in the internal partition of the housing, and a pressure spring acting on it, braced against the housing.

Page 3, second full paragraph:

In a simple design, the dipping piston ~~may be~~ is made of a disk positioned in the extension piece with radial play and having openings which are solidly attached to the piston rod, a stop provided on the piston rod at a distance from the disk, and a cover disk movably mounted between the stop and the disk, by which the openings in the disk may optionally be covered.

Page 3, third full paragraph:

It is also advisable to attach the piston rod to the differential piston by using a connecting piece, through which fluid can flow, attached to the latter, and ~~to design for~~ for the volume of the first pressure chamber of the differential piston to be about 1.2 to 2.5 times as large as the volume of the second pressure chamber.

Page 3, last paragraph:

Constructing a piston pump according to the invention guarantees that the flow delivered to the implement will not be interrupted, in spite of the reversals of the displacement motions of the differential piston; instead, the dipping piston and the design of the volumes and of the inlet valve positioned in the offset transport line ensure that the two pressure chambers are always completely filled with the medium that is to be processed. Due to the force of the spring acting on the

movable part of the inlet valve which is not affected by the piston rod and the dipping piston, the inlet valve closes automatically as soon as there is no longer negative pressure in the first pressure chamber; as a result, backflow is no longer possible. The space vacated by the ejection of the medium to be processed from the second pressure chamber is thus immediately filled when the differential piston is moved in the direction of the inlet valve. Furthermore, because of the differently dimensioned effective faces of the differential piston, medium continues to be ejected. Therefore, there is no interruption of the transport stream ~~needs to be accepted~~, nor can air pockets form.

Page 4, fifth paragraph:

Figure 3: ~~a different type of~~ an alternative design of the transport line fitted with an inlet valve, in the operating position according to Figure 1.

Page 4, sixth paragraph:

Figure 4: ~~the different type of design of the~~ alternative transport line fitted with ~~an~~ the inlet valve of Figure 3, in the operating position according to Figure 2.

Page 5, first full paragraph:

The medium to be processed is fed to first pressure chamber 13 through a transport line 22, whose segments 22' and 22" are provided in a connecting piece 21. Connecting piece 21 is attached to housing 11 of differential piston 12, or housing 11 is screwed into connecting piece 21. Inserted into transport

line 22 between segments 22' and 22" is an inlet valve 23, consisting of a valve body in the form of a ball 25, and a ring 26 as the valve seat. Ball 25 is held in a cage 24 formed by crossbars, and these are acted on by a spring 27 ~~inserted into~~ disposed in a plug 28 screwed into connecting piece 21. Segments 22' and 22" of transport line 22 are closed by additional plugs 29 and 29'.

Page 5, second full paragraph:

Also mounted on connecting piece 21 is an extension piece 30, which makes up part of transport line 22, and in which a dipping piston 41 is positioned and axially movable. To accomplish this, a piston rod 31 is firmly connected with differential piston 12 by means of a connecting piece 36 through which fluid can flow, which is provided with openings 37 for that purpose. Pass-through 32 of piston rod 31 from first pressure chamber 13 of housing 11 into extension piece 30 is closed fluid-tight by means of a seal 34 ~~inserted into~~ disposed in a sleeve 33. To this end, a nut 35 screwed into connecting piece 21 acts on seal 34.